

*Loudoun County Parkway
(Route 606) / Old Ox Road*

RECONSTRUCTION  WIDENING PROJECT

INITIAL FINANCIAL PLAN

PROJECT NO.
0606-053-983, P101, R201, C501, B686, B687

UPC NO.
97529

November 14, 2014



VDOT



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1. BACKGROUND

Purpose

The Route 606 Loudoun County Parkway/Old Ox Road Initial Financial Plan is prepared pursuant to requirements of the *Code of Virginia*, as described below.

§ 33.2-368 of the *Code of Virginia* provides:

“For transportation construction projects valued in excess of \$100 million, the Commissioner shall require that a financial plan be prepared and presented to the Commonwealth Transportation Board for its review. This plan shall include, but not be limited to, the following: (i) a complete cost estimate for all major project elements, (ii) an implementation plan with the project schedule and cost-to-complete information presented for each year, (iii) identified revenues by funding source available each year to meet project costs, (iv) a detailed cash-flow analysis for each year of the proposed project, and (v) efforts to be made to ensure maximum involvement of private enterprise and private capital.”

Summary

When Dulles International Airport (IAD) was constructed in the early 1960s, a system of two-lane two-way perimeter roadways was constructed to serve the airport and surrounding areas. The west perimeter roadway built in 1961 functions today as Route 606 between US Route 50 and the Route 267 (Dulles Greenway Toll Road). Under existing conditions, this is the last section of unimproved roadway corridor serving the IAD perimeter. US Route 50, Route 606 from Route 267 to Route 28 Sully Road, Route 28 Sully Road, and Route 267 Dulles Greenway have all been widened and improved to provide high capacity corridors serving the airport's south, east, and north perimeter areas, respectively.

Route 606 is a desirable route for motorists originating from points west to access Ashburn, Sterling, and Herndon. The road currently experiences severe congestion in both directions during the weekday morning and evening peak hour periods.

Planning for the widening of the Route 606 corridor between Route 50 and the Dulles Greenway has been ongoing since the early 1990s. The first segment of Route 606 was improved in 2002-03 with the reconstruction and widening between US Route 50 and Route 621 Evergreen Mills Road.

The current Route 606 improvement project will construct the ‘Interim Condition’ as described in Loudoun County’s Countywide Transportation Plan. The plan calls for Route 606 to be a four-lane median-divided roadway. The ultimate condition as described in the Countywide Transportation Plan calls for an 8 lane limited-access, median-divided urban arterial roadway. The proposed design implements the interim condition while enabling a future conversion to its ultimate condition.

The Metropolitan Washington Airport Authority (MWAA), Loudoun County and Virginia Department of Transportation (VDOT) are jointly funding the project, which is being developed by VDOT. The current budget for the Route 606 project is \$107,650,000.



Project Description

The project is located in Loudoun County and extends from approximately 0.3 mile south of Route 621 Evergreen Mills Road to approximately 0.1 mile south of Route 267 Dulles Greenway with a total length of approximately 5.5 miles. It consists of reconstructing and widening the existing two-lane rural collector roadway to a four-lane divided Urban Minor Arterial with a depressed grass median and a shared use path on one side for bicycles and pedestrians.

The project includes crossings of Cabin Branch and Horsepen Run, the latter of which occurs where Route 606 crosses Horsepen Dam, which is owned by the Metropolitan Washington Airports Authority (MWAA). The Project will require substantially increasing the earth mass of the dam and constructing twin bridges to carry Route 606 over the dam's emergency spillway.

Project History

Preliminary Engineering was authorized in January 2011 and VDOT started engineering activities for the development of the design including consultant procurement, scoping, survey, geotechnical investigations and environmental review processes.

A Design Public Hearing was held on June 26, 2013 and Chief Engineer Design Approval was received on October 10, 2013.

The project was developed as a Design-Build Contract and the Request for Qualifications (RFQ) was issued In July 2013 after the Finding of Public Interest (FOPI) was signed by the Commissioner and Chief Engineer.

The Request for Proposals (RFP) was released to the short listed Offerors on November 26, 2013 and Addendum 1 was released on February 21, 2014. Technical Proposals were received on March 17, 2014 and Price Proposals were received on April 21, 2014.

The Commonwealth Transportation Board approved the award of a contract to Shirley Contracting Company on May 14, 2014. The contract was executed on May 21, 2014 and Notice to Proceed was issued on June 19, 2014.

Current Activities

The project kick-off meeting was held on June 19, 2014. The Design-Builder is performing survey and geotechnical boring for completion the final design.

Project Website

Additional information on the Route 606 Loudoun County Parkway/Old Ox Road project can be found on the project website at the following link:

http://www.virginia-dot.org/projects/northernvirginia/old_ox_road_widening.asp

The website provides additional information regarding project description, purpose, maps, implementation schedule, typical sections and cost estimates.



2. PROJECT SCHEDULE

Table 1 below illustrates the contract procurement schedule activities and dates.

Table 1: Contract Procurement Schedule

Activity	Date
Notice of Intent to Award	04/29/2014
CTB Approval/Notice to Award	05/14/2014
Contract Award	05/15/2014
Contract Execution	05/21/2014
Notice to Proceed (Date of Commencement)	06/19/2014
End Scope Validation Period (120 days from NTP)	10/18/2014
Final Completion	09/08/2017

Since the Route 606 Loudoun County Parkway/Old Ox Road project is a Design-Build project Table 2 below illustrates the project implementation plan showing the actual or anticipated start and completion dates for the major project activities.

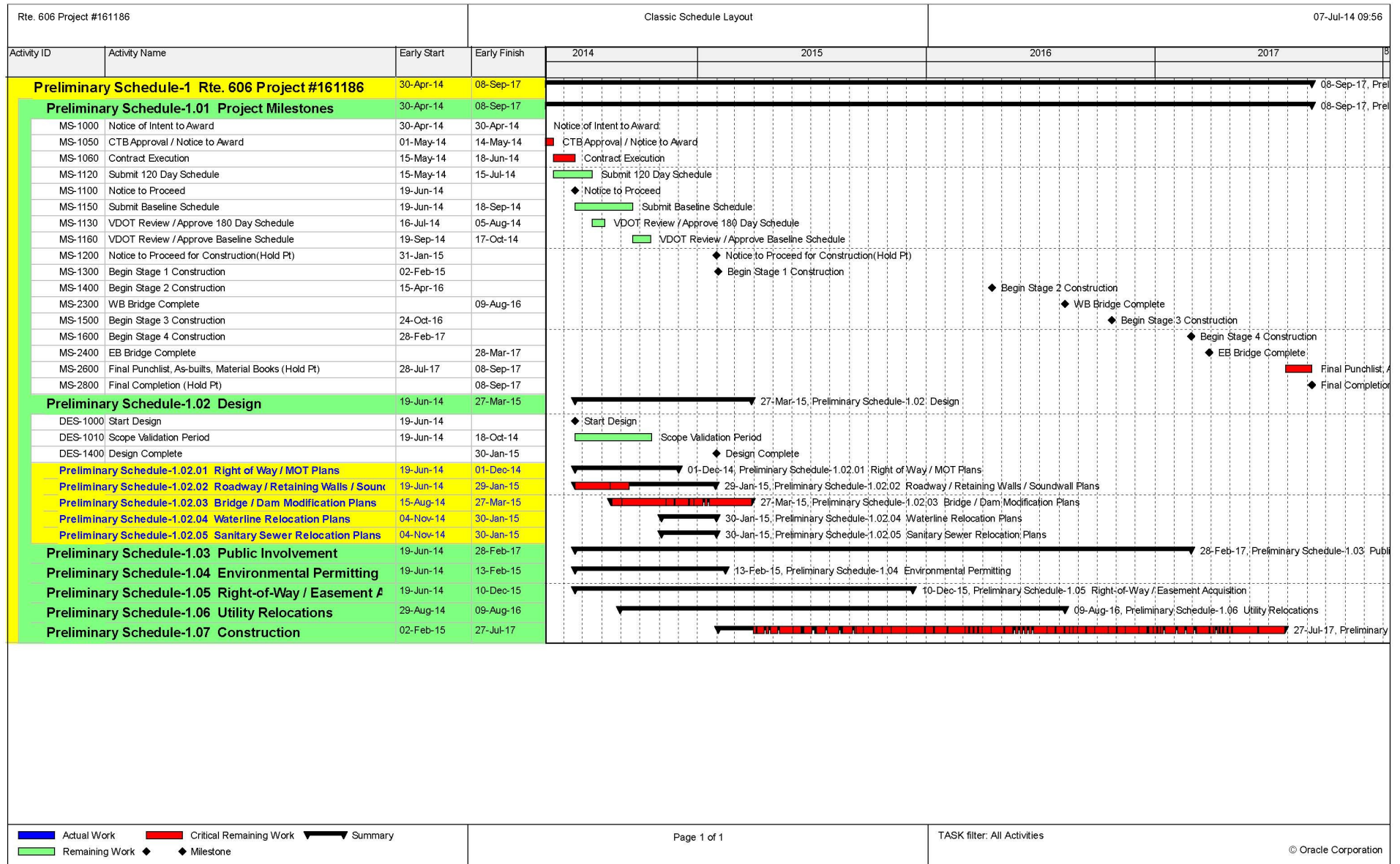
Table 2: Project Implementation Plan

Element	Start Date	Completion Date
Preliminary Engineering Final Design		
Final Design :	June 19, 2014	December 23, 2014
Right of Way		
ROW Acquisition:	November 3, 2014	December 10, 2015
Utility Relocation	June 8, 2015	June 13, 2016
Construction		
Road and Bridge Construction:	May 1, 2015	September 8, 2017

* See schedule bar chart for detailed data



Loudoun County Parkway
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RECONSTRUCTION & WIDENING PROJECT





3. PROJECT COST ESTIMATE

The project is jointly funded by VDOT, Loudoun County and MWAA. Three separate project administration agreements were necessary; one between VDOT & Loudoun County and two between VDOT & MWAA. Consequently, for programming purposes, three UPC numbers were established: 97529, 105064 and 105575.

VDOT and Loudoun County are jointly funding UPC 97529. The project purpose for UPC 97529 is to increase capacity of the Route 606 corridor in accordance with the Loudoun County Transportation Plan. The funding split for UPC 97529 is VDOT - \$57,044,576 & Loudoun County - \$25,655,42 with a total budget amount of **\$ 82,700,000**.

MWAA is funding two UPCs 105064 & 105575. The project purpose for UPC 105064 is to increase capacity of the Route 606 corridor in accordance with the Loudoun County Transportation Plan. The project purpose for UPC 105575 is to construct a commercial entrance, supporting turn lanes and traffic signal modifications to provide access to a rail car maintenance facility that is part of Phase 2 of the Silver Line extension of Metrorail. The funding amounts for these two UPCs are \$24,450,000 & \$500,000 respectively, with a total budget amount of **\$ 24,950,000**.

The total combined project budget for all three UPCs (97529, 105064 & 105575) is **\$107,650,000**.

VDOT's Project Cost Estimating System (PCES) is the official source for all cost estimate information. Table 3 below shows the current total project cost estimate for the Route 606 Loudoun County Parkway/Old Ox Road project under each UPC.

Table 3: Project Cost Estimate by Phase

Phase	UPC 97529	UPC 105064	UPC 105575	Total
PE	\$3,402,043	\$0	\$50,000	\$3,452,043
RW	\$9,000,000	\$8,000,000	\$0	\$17,000,000
CN	\$70,297,957	\$16,450,000	\$450,000	\$87,197,957
Total	\$82,700,000	\$24,450,000	\$500,000	\$107,650,000

4. PROJECT FINANCING

Summary of Estimates and Expenditures as of 2/9/15

Table 4: Comparison of Project Estimate and Expenditures

Phase	Estimate	Expenditures (11/14/14)
PE	\$3,452,043	\$3,403,239
RW	\$17,000,000	\$28,979
CN	\$87,197,957	\$7,155,850
Total	\$107,650,000	\$10,588,068



Project Funding and Allocations

Tables 5 below shows the funding allocations by source over the period of the Six Year Program.

Table 5: Live Six Year Program FY2016-2021

Funding Source	Previous & 2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	TOTAL
CTB Formula Federal	\$600,000	\$0	\$0	\$0	\$0	\$0	\$0	\$600,000
CTB Formula Soft Match	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$150,000
MAP21 RSTP NOVA	\$2,800,000	\$4,203,814	\$6,631,848	\$0	\$0	\$0	\$0	\$13,635,662
Bond Match	\$140,000	\$0	\$0	\$0	\$0	\$0	\$0	\$140,000
Bond Proceeds	\$125,000	\$0	\$0	\$0	\$0	\$0	\$0	\$125,000
Minimum Guarantee	\$560,000	\$0	\$0	\$0	\$0	\$0	\$0	\$560,000
CTB Formula State	\$0	\$2,000,000	\$10,470,440	\$15,167,562	\$10,786,998		\$0	\$38,425,000
MAP21 RSTP State	\$700,000	\$1,050,953	\$1,657,961	\$0	\$0	\$0	\$0	\$3,408,914
Local Project Contributions	\$47,275,000	\$3,330,424	\$0	\$0	\$0	\$0	\$0	\$50,605,424
Total	\$52,350,000	\$10,585,191	\$18,760,249	\$15,167,562	\$10,786,998	\$0	\$0	\$107,650,000



5. CASH FLOW

Table 6 below shows the projected project cash flow over the life of the project by year and funding source.

Table 6: Total Project Cash Flow Projections

	Previous & FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	Totals
Existing / Projected Expenditures	\$38,508,368	\$42,209,000	\$23,831,000	\$3,101,632	\$0	\$0	\$0	\$107,650,000
Accumulated Expenditures	\$38,508,368	\$80,717,368	\$104,548,368	\$107,650,000	\$107,650,000	0	\$0	
Available Funding								
MWAA	\$24,950,000	\$0	\$0	\$0	\$0	\$0	\$0	\$24,950,000
Loudoun County	\$22,325,000	\$3,330,424	\$0	\$0	\$0	\$0	\$0	\$25,655,424
VDOT	\$5,075,000	\$7,254,767	\$18,760,249	\$15,167,562	\$10,786,998	\$0	\$0	\$ 57,044,576
Accumulated Allocations	\$52,350,000	\$62,935,191	\$81,695,440	\$96,863,002	\$107,650,000	\$0	\$0	\$107,650,000
Cash Flow	\$13,841,632	-\$17,782,447	-\$22,852,928	-\$10,786,998	\$0	\$0	\$0	\$0



6. INVOLVEMENT OF PRIVATE ENTERPRISE AND PRIVATE CAPITAL

N/A

7.0 RISKS & MITIGATION MEASURES

Major urban highway improvement projects such as the Route 606 Loudoun County Parkway Project involve risks that can result in project cost escalation and/or delays. After review of the project scope and schedule, the VDOT team has identified following potential risks and mitigation strategies.

7.1 WORK ORDERS AND POTENTIAL CHANGE ORDERS

Scope Validation on a large project such as this has the potential for some changes by work orders, particularly when there are multiple partners such as The Metropolitan Washington Airport Authority (MWAA), Loudoun County and VDOT involved with the delivery of the major components of the work. One of the major components of work is the Horsepen Dam.

- **Horsepen Dam Modification Redesign**

As per contract scope validation clause, the Design-Builder is required to validate the RFP dam requirements and notify the Department of its findings. There are several scope validation issues related to the Horsepen Dam Design resulting as an outcome of the design validation by the Design Engineer of Record.

To mitigate and/or minimize this risk, VDOT and WR&A who is the dam owner's (MWAA) engineer for the Dam Alteration Permit, is jointly reviewing the Design-Builder's justification for the scope validation issue and will decide the best course of action to resolve the issue before submitting the final dam alteration permit application to DCR Dam Safety Division. The Department has also planned to employ a third party geotech company involved with the RFP design development to assist in conducting the owner's QA and IV testing for VDOT during construction to manage and mitigate construction risks.

- **Loudoun County Parkway Interchange**

This interchange was in the RFQ advertised package for the 606 Design-Build contract, but was deleted prior to issuance of the RFP due to budget constraints on the project. As the D-B contract was less than anticipated, and the need identified for completion of this interchange by Loudoun County, this work is being added to the contract.

To mitigate and/or minimize cost impact, VDOT has authored an agreement with Loudoun County that should the cost of the interchange exceed the available funding from contingency, Loudoun County will provide additional funds to make up the deficit.



- **NOAA**

As part of the Route 606 reconstruction project design, a permanent easement from NOAA for widening the roadway and rerouting utilities is required for which some eleven (11+) acres. NOAA however is stating that they were not invited to join the NEPA process as either a “cooperating agency” or a “participating agency” and as such they are stating that they “will not be able to grant an easement until the NEPA obligations have been met for the purposes of NOAA’s decision. NOAA has informed VDOT that their decision to grant easement is a federal decision subject to NEPA. NOAA has asked for assistance from VDOT to meet their legal obligations. This is a risk to schedule as well as budget as NOAA is looking for improvements to their property access as well as drainage. The Department is managing this risk by engaging a consultant Environmental Specialist & a Hydraulic Engineer to evaluate the potential environmental impacts to NOAA property as working diligently to manage the schedule to minimize impacts should this process be extended.

7.2 RIGHT OF WAY ACQUISITION

ROW on this project includes permanent easements that must be obtained from separate government agencies, MWAA, the National Oceanographic Atmospheric Association (NOAA) as well as from multiple land owners. The bulk of the ROW will however come from MWAA where Permanent Easement of up to 40 acres will be required.

To mitigate and/or minimize this risk of delay in this matter, the Design-Builder plans to request MWAA to grant an early ROE. MWAA has verbally agreed for this to occur during meeting held on June 30, 2014. The Department also has designated a person to handle the procurement of easements from NOAA and MWAA.

7.3 INTERFACES WITH ADJACENT PROJECTS

The Route 606 corridor has multiple projects being constructed concurrently. Additionally, with the improvements to Route 606 by widening to four (4) lanes, many parcels are being developed and are wanting to coordinate their improvements with VDOT for cross overs and or coordination of storm water management ponds etc. Particular interfaces are:

- **Parcel 009, Farah-Naples Property**

During the public hearing, this property owner had raised objection to the proposed location of two SWMPs at the front of his property. The property owner asked VDOT to relocate the ponds to the back of the property to mitigate impacts to the property and diminishing property value. The Department decided to defer resolution of the issue to post-award phase in order not to delay the contract procurement as a result of the additional environmental studies required to satisfy NEPA compliance.

To mitigate and/or minimize this cost and/or schedule impact, VDOT, Loudoun County and the Farah-Naples property owners have met to resolve the property owner’s concern by considering an alternate design of moving the ponds to the



rear of the parcel. Property owner has agreed in principle to provide the ROW/easements and bear the cost for construction of the ponds in the rear of his parcel.

- **Parcel 011, Ten Acre LLC Property**

This developer wants to coordinate with VDOT for incorporating their proffered improvements and access to their property such that the final design of Route 606 addresses their need and as such minimizing the need for re-work of the roadway.

To mitigate and/or minimize this cost and/or schedule impact, VDOT plans to arrange internal and external meetings to facilitate developer's request, provided a fair and amenable agreement can be achieved between parties involved.

- **Parcel 065, Evergreen Commerce Center**

This developer wants to coordinate with VDOT for incorporating their frontage improvements and access to their property such that the final design of Route 606 addresses their need and as such minimizing the need for re-work of the roadway.

To mitigate and/or minimize this cost and/or schedule impact, VDOT plans to arrange internal and external meetings to facilitate developer's request, provided a fair and amenable agreement can be achieved between parties involved.

- **Parcel 020, Dulles Landing**

Development of new shopping Center with tie into Route 606 at the western project limits is currently under construction. This shopping center is constructing an acceleration and deceleration lane where the Route 606 project is showing to drop a lane from three (3) to two (2) lanes and as such has created a conflict to the Route 606 design. To mitigate this issue, the Route 606 project will have to remove and reconstruct a small portion of the Dulles Landing entrance and reconstruct new right turn lane into the shopping center in order to continue the 3rd thru lane.

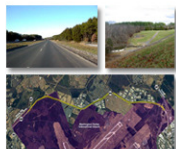
To minimize this cost and/or schedule impact, VDOT has arranged internal and external meetings to facilitate developer's design to minimize the rework in this area.

8. UPDATES AND RESOURCES

Future Updates

Any required adjustments to the cost estimate will be computed in a manner consistent with the methodology established in the Initial Financial Plan and Annual Financial Plan updates.

The Financial Plan will be updated annually upon completion of the state fiscal year and will be based on the information contained in the annual update of the SYIP. The



Financial Plan will also be updated as needed based on significant changes to anticipated project costs in accordance with Department policies and procedures.

VDOT will continue to monitor the project and issue periodic progress reports to update the status of work underway and provide advanced warning of potential issues.

VDOT Resources

Table 7 below lists VDOT resources associated with the Route 606 Old Ox Road/Loudoun County Parkway Widening and Reconstruction project.

Table 7: VDOT Resources

Central Office	NOVA District
Garrett W. Moore, P.E. Chief Engineer (804) 786-4798	Helen L. Cuervo, P.E. District Administrator (703) 259-2345
John W. Lawson Chief Financial Officer (804) 786-2707	Susan N. Shaw, P.E., DBIA, CCM District Engineer, Mega Projects (703) 259-1995
Dianne Mitchell Federal Programs Management Director (804) 786-2741	Shirlene Cleveland, P.E. District Design-Build Program Manager (703) 691-6710
Mohammad Mirshahi, P.E. Deputy Chief Engineer (804) 786-1475	Maria J. Sinner P.E. Assistant District Administrator, Programming and Investment Management (703) 259-2342
Barton A. Thrasher, P.E. State Location and Design Engineer (804) 786-5869	Jan S. Vaughan Manager NOVA Program Management NOVA District (703) 259-2425
John C. Daoulas P.E. Senior Project Delivery Engineer (804) 371- 6787	Stephen L. Bates, P.E. District Location and Design Engineer (703) 259-2949
Jeffrey A. Roby, P.E. Alternate Project Delivery Program Manager (804) 786-1103	James C. Zeller, P.E. Preliminary Engineering Manager (Loudoun County) (703) 259-3220
Shailendra Patel, P.E., DBIA Director, Alternate Project Delivery Office (804) 692-0476	Zamir A. Mirza District Project Manager (703) 259-1794
	Sanjeev Suri, P.E., DBIA, PMP, CCM District Design-Build Project Manager (703) 259-2232